

An Unusual Abdominal X-ray

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A 71-year-old Caucasian male was referred by his general physician for dyspnea, mild hypertension and sustained elevation of serum creatinine. Relevant past history included chronic kidney disease and mitral insufficiency. His glomerular filtration rate was calculated to be 12.23 mL/min according to the Modification of Diet in Renal Disease equation. Because of his advanced renal failure, due most probably to nephroangiosclerosis, hemodialysis was started. After 10 days, a peritoneal catheter (Tenckhoff Swan-neck double-cuff pigtail-right) was implanted via a paramedial approach without incident. After contrast injection, fluoroscopic control was made to confirm the position of the catheter in the Douglas space.

Two weeks later, an attempt to infuse dialysis fluid via the peritoneal dialysis catheter was made unsuccessfully, and a catheter flow obstruction was observed. Plain abdominal radiography showed migration of the tip of the catheter in the left flank; a central opacity was also noted (Panel A).

Further questioning of the patient revealed that the round opacity within the image was a silicone abdominal reservoir of a urinary sphincter prosthesis (AMS 800; American Medical Systems Inc., Minnetonka, MN, USA).

The AMS 800 artificial urinary sphincter is the most commonly used device and is the criterion standard for the treatment of incontinence caused by intrinsic sphincter dysfunction. It is composed of a pressure-regulating balloon, an inflatable cuff, and a control pump. The balloon has a dual function: it is a pressure regulator and a fluid reservoir. Balloon reservoirs are typically placed in the lower abdomen. The inflatable cuff has a variable length that compresses the urethra or the bladder neck circumferentially. The cuff is placed around the bulbar urethra in adult males. For women and children, the bladder neck is the only site that should be used. The control pump contains unidirectional valves, a delayed-fill resistor, a locking mechanism, and



Panel A. Plain abdominal radiography shows migration of the catheter tip in the left flank. A central opacity (arrow) can also be seen.

a deflate pump. The control pump is small and easily concealed within a subcutaneous or Dartos pouch in the scrotum. The delayed-fill resistor is responsible for automatic cuff refilling. Cuff inflation takes 3–5 minutes, although bladder emptying takes less time [1].

Catheter flow obstruction is a common cause of technical failure. It usually occurs as a result of catheter migration, omental or small bowel entrapment, or fibrin clots [2]. In this case, there was migration of the tip of the catheter in the left flank, and in the interior, radio-opaque contrast residue could be seen.



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Although the reservoir of the urinary sphincter prosthesis is placed in the extraperitoneal space and it does not represent a contraindication for peritoneal dialysis, the surgeon and the nephrologist should be aware of it in order to avoid possible complications. Therefore, anamneses and clinical examination remain a priority.

REFERENCES

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